

# Greenhouse ornamentals-Mealybug

## Includes

Citrus mealybug (*Planococcus citri*)

Longtailed mealybug (*Pseudococcus longispinus*)

**Pest description and crop damage** Like other soft-bodied, piercing mouthpart insects, mealybugs suck plant juices, cause tissue distortion, and plant decline, and secrete honeydew copiously. Keys are commercially available to distinguish species of mealybugs, scales, and whiteflies. Citrus mealybug, *Planococcus citri*, is a common pest in such situations. The longtailed mealybug, *Pseudococcus longispinus* is another familiar species in protected systems distinguished by two long waxy filaments forming a 'tail.'

**Biology and life history** Adult mealybugs lay their eggs generally in an ovisac or egg sack often near a stem juncture or under thick stipules. The ovisac is made out of a white, waxy secretion and may be filled with several hundred eggs. Once the eggs hatch, the tiny nymphs move around the plant where they feed. Adult female mealybugs resemble the nymphs, though larger, but the males look like small white-colored flies and are uncommonly seen.

**Scouting and thresholds** Scout for the white egg sacs near stem nodes and branch connections. Some species of mealybugs spend time as a root infesting aphid, so new plant acquisitions should be inspected for infestations above and below the plant surface.

## Management-biological control

Natural enemies include:

- lady beetle, *Cryptolaemus montrouzieri*, "mealybug destroyer"
- predatory wasp, *Leptomastix* (for citrus mealybugs), *Pseudaphycus angelicus* (for longtailed mealybug),

## Management-chemical control

Mealybug and scale pests are best controlled at the "crawler" stage: the immature, active stage when the insects are most sensitive to insecticides.

- acephate (Precise) at 0.024 lb ai/1,000 sq ft broadcast (0.6 oz). REI 24 hr.
- acetamiprid (Tristar 30SG) at 0.5 lb ai/100 gal (2.7 oz). REI 12 hr.
- azadiractin (Azahar, Azatin XL)-Some formulations are OMRI-listed for organic use.
- *Beauveria bassiana* (Botanigard, Mycotrol, Naturalis L)-Some formulations are OMRI-listed for organic use.
- bifenthrin (Firebird, Quali-Pro, Talstar) at 0.25 to 0.5 lb ai/1,000 sq ft. REI 12 hr. Restricted use pesticide.
- buprofesin (Talus 70DF) at 0.53 lb ai/a. REI 12 hr. Works on immature stage.
- chlorpyrifos (Quali-Pro)-Restricted use pesticide.
- clarified hydrophobic extract of neem oil (Triact 70)
- clothianidin (Arena 50 WDG) at 0.9 to 1.26 oz/100 gal. REI 12 hr. Soil treatment refer label.
- cyfluthrin + imidacloprid (Discus N/G) at 0.063 lb ai/100 gal foliar; 0.009 to 0.014 lb ai/1,000 ft soil. REI 12 hr.
- dinotefuran (Safari 20SG) at 0.1 to 0.2 lb ai/1000 ft sq; 0.05 to 0.1 lb ai/100 gal. REI 12 hr.
- fenpropathrin (Tame 2.4EC) at 0.3 lb ai/a (16 fl oz). REI 24 hr.
- fenproximate (Akari 5SC) REI 12 hr.
- flonicamid (Aria) at 0.134 to 0.268 lb ai/a. REI 12 hr.
- garlic oil/powder (Allityn)-Some formulations are OMRI-listed for organic use.
- imidacloprid (Marathon II) at 1.7 fl oz/100 gal foliar. REI 12 hr. Drench and irrigation permitted.
- kaolin (Surround)-Some formulations are OMRI-listed for organic use.
- mineral oil/petroleum distillate (Biocover LS)-Some formulations are OMRI-listed for organic use.
- naled (Dibrom 8) as vapor treatment
- *Paecilomyces fumosoroseus* (PFR 97) at 0.175 to 3.5 lb ai/100 gal foliar. REI 4 hr.
- potassium laurate (several labels)-Some formulations are OMRI-listed for organic use.
- pyrethrins + canola oil (E.B. Stone, Earth-tone, Worryfree)
- pyrethrins + piperonyl butoxide
- pyrifluquinazon (Rycar) at 0.09 lb ai/100 gallonsgal. REI 12 hr. Limit 2 treatments per crop.
- pyriproximate (Distance) at 0.054 to 0.081 lb ai/100 gal (8 to 12 fl oz) foliar. REI 12 hr. Works on immature stages.
- sorbitol octonoate (Sorbishield 90)
- soybean oil (Golden Pest Spray)-Some formulations are OMRI-listed for organic use.
- spirotetramat (Kontos) 1.7 to 3.4 fl oz/100 gal. REI 24 hr. Systemic activity.
- thiamethoxam (Flagship 25WG) as fogger. REI 12 or 24 hr.

- tolfenpyrad (Hachi-Hachi) at 14 to 32 fl oz/100 gal. REI 12 hr.

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**In case of emergency**

Call your poison control center: 1-800-222-1222

If the patient has collapsed or is not breathing: call 9-1-1

Pesticide Safety Information

**Pacific Northwest Handbooks**

PNW Insect Management Handbook

PNW Plant Disease Management Handbook

PNW Weed Management Handbook

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